



Case report

An unusual case of smothering by a medical nebulizer



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ABSTRACT

The following report describes an unusual case of smothering by a medical nebulizer of a psychiatric in-patient and discusses the manner of death. A 43-year-old man, with previous medical history of paranoia was hospitalized at a psychiatric department because of a suicide attempt. He was found dead by the medical staff in the seclusion room. The patient is known suffering from asthma attacks treated by Ventoline® spray. Autopsy findings showed a ventoline's nebulizer impacting within the pharynx and in the upper part of oesophagus. These findings were compatible with a death by smothering. Smothering is an uncommon cause of suicide and is particularly observed in psychiatric patient. Suicidal death is established by the study of the circumstances and autopsy finding. This paper highlights the importance of a closer psychiatric in-patient residing in seclusion room.

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1. Introduction

Smothering is defined as a mechanical obstruction of the upper airways mostly caused by a foreign body.¹ The manner of death can be natural, homicidal or accidental.¹ Suicidal or homicidal deaths by smothering are relatively uncommon.^{1,2} Most smothering deaths are accidental in manner.¹ Suicide by smothering has rarely been reported in literature.³ It is usually associated with severe psychiatric disorders.³ The suicidal nature of the event is established by the study of the circumstances of the death, the death-scene observations of the body, the external examination and the autopsy, after the elimination of the possibility of homicide or accident. A literature review revealed several cases of suicidal mechanical asphyxia of patients with a history of psychiatric illness.

The following report describes an unusual case of smothering by a medical nebulizer of a psychiatric in-patient and discusses the manner of death.

2. Case report

A 43-year-old man, was hospitalized without his consent at a psychiatric department. He had been previously diagnosed having paranoia using the criteria in the DSM IV.⁴ He had been previously

suffering from asthma attacks treated by Ventoline® sprays which he carried on using during his hospitalization. His actual hospitalization was justified because he has attempted suicide by drug ingestion. During his hospitalization, he had been placed in a seclusion room. Seclusion is defined as the supervised confinement of a patient specifically placed alone in a locked room for a period at any time of the day or night for the protection of the patient, staff or others from serious harm. The medical staff has withdrawn possibly dangerous objects that can be used by the patient to commit suicide or self-mutilation in seclusion room. The seclusion room was arranged in away permitting the observation of the patient in all area of the room.

The patient was found dead in his room by the medical staff three days after hospitalization. The nebulizer was given to the patient during his hospitalization. Medical staff has no idea that this nebulizer is consider as a dangerous object. On death scene investigation, we found that the room contained a mattress with no sheets. The patient was found dead by the medical staff, lying on his back in the seclusion room. A judicial autopsy was ordered by the public prosecutor's department.

External examination of the body showed a marked facial cyanosis without any violence evidence. Autopsy showed non-specific asphyxia signs such as multivisceral congestion. There were no suspected internal injuries. Pharynx examination showed a Ventoline® nebulizer impacting within the cervical oesophagus and completely obstructing the upper airways (Fig. 1). Tests for alcohol, toxic substances or drug, except antidepressant and tranquilizer drugs in therapeutic level, yielded negative results. It was concluded

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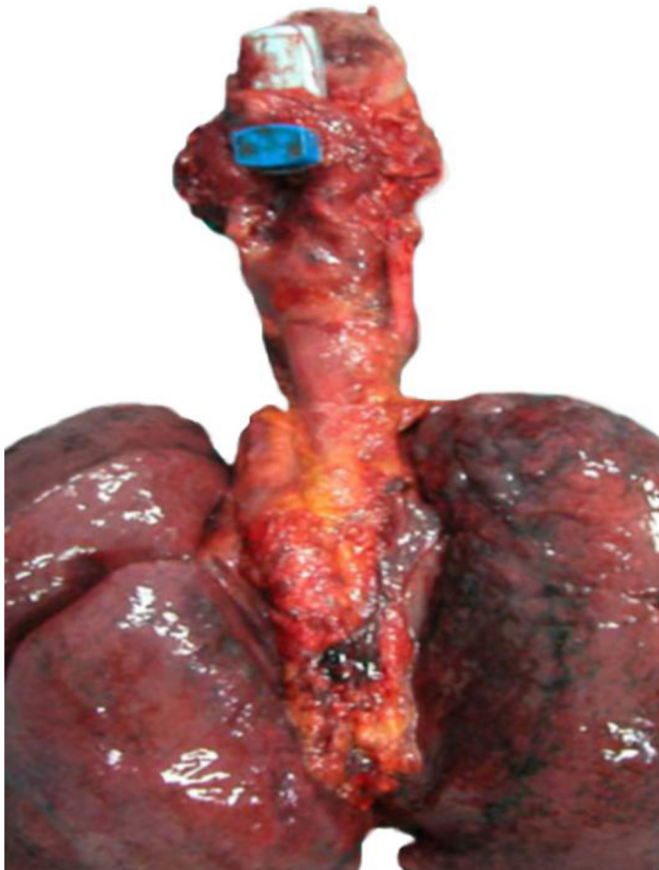


Fig. 1. Obstruction of laryngopharynx by medical nebulizer.

that death had resulted from smothering due to obstruction of the upper aerodigestive tract by a medical nebulizer.

3. Discussion

Smothering is a common cause of asphyxia usually reported in cases of accidental death. Suicidal aetiology is rare and usually associated with a psychiatric illness such as paranoia, schizophrenia and depression.⁵

Self-destructive cases were mainly caused by hanging, while strangulation or smothering was also suspected as a cause of death in some psychiatric patients.⁶ The suicidal nature of asphyxia smothering remains difficult to affirm. Diagnosis establishment requires eliminating the possibilities of homicide and accident. Accidental smothering is commonly reported in cases of newborn babies and infant.¹ It is uncommon in cases of normal healthy adults. There are several risk factors for smothering on food.⁷ These include middle-aged men who eat large food boluses, with poor condition or absence of the teeth and alcohol intoxication. Individuals with neurological conditions such as dementia, Parkinson's disease, epilepsy and psychiatric disorders such as schizophrenia are also at risk.^{7,8} This hypothesis can be excluded by the study of the circumstances of the death, the death scene investigation, the external examination of the body and the autopsy findings.^{5,9}

In the present case, accident can be excluded regarding to the dimensions of the nebulizer. Homicide cannot be excluded with certainty. In fact, smothering can result, in this case, from a forced obstruction of the upper airways in a patient using antidepressant

and tranquilizer drugs. Suicidal smothering seems to be the more reliable hypothesis in this case, because of the prior history of suicide attempt, the legal inquiry revealing the absence of felonious entry in the victim's seclusion room, the absence of lesions of violence or self-defence and the negative results of toxicological analysis. The medico-legal diagnosis of death is based on the integration of the data recorded at the death scene with those found at autopsy and on the victim's psychological profile.

Patients can use various kinds of foreign bodies to commit suicide. Nevertheless, soft objects such as plastic bags constitute the most frequent means reported.^{5,10} Several cases of subjects suffering from psychiatric illness who committed suicide by means of smothering have been reported in the medical literature. Saint-Martin⁵ reported the case of a 30-year-old man diagnosed as having a borderline personality disorder who died by suicidal smothering due to obstruction of upper aerodigestive tract by pellets of toilet paper. Hayase⁹ presented the case of a 21-year-old man, suffering from identity disorder, jumped into the drum of a garbage truck and the iron roller in the drum asphyxiated him by compression. DiVella¹¹ described an unusual suicidal smothering by means of multiples loops of adhesive gummed tape. Several other cases were reported in literature presenting different other means of suicide by smothering used by psychiatric patients such as smothering in a pillow or by entrapping the neck in the electrically operated hydraulic device used for raising and lowering the hospital bed.^{2,12} In the reported case, the patient's operating process had not been reported before. Such cases of smothering tend to increase surveillance of isolated patients with risk of suicide. In fact, every physician can do more to detect the risk of suicide, take anti suicide action, and sensitize himself to the seriousness of the entire problem of suicide especially for psychiatric patients. Some recommendation may be established to install special program for surveillance of psychiatric in-patient residing in seclusion room. Hospital and doctors can be responsible if negligence in surveillance is proved. Legally, the medical staff must withdraw possibly dangerous objects that can be used by the patient to commit suicide or self mutilation in seclusion room and install a specific program of surveillance. In this case medical nebulizer cannot be considered as a potential dangerous object. There is no report or medical publication showing that a suicide can be made using a medical nebulizer. But surveillance of the patient can be put in doubt in this case. Medical liability can be engaged for lack of surveillance of the patient.

Ethical approval

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Conflict of interest

None declared.

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